

## Do Female Executives Manage Earnings Differently? A Gendered Analysis of Decision-Making



Teodora Tica Ilić<sup>1</sup>

Kristina Peštović<sup>2</sup>

Bojana Vuković<sup>3</sup>

University of Novi Sad, Faculty of Economics in Subotica, Department of Finance and Accounting, Subotica, Republic of Serbia

Nedeljko Tica<sup>4</sup>

University of Novi Sad, Faculty of Agriculture, Department of Agricultural Economics, Novi Sad, Republic of Serbia

Dušan Saković<sup>5</sup>

University of Novi Sad, Faculty of Economics in Subotica, Department of Finance and Accounting, Subotica, Republic of Serbia

### ABSTRACT

*Given the fact that involvement of women in boardrooms and earnings reporting quality remain highly debated topics in the corporate environment — often offering mixed empirical evidence — this study reevaluates the gender–earnings management nexus from a regional perspective. Specifically, it investigates whether female presence on company boards and in CEO positions influences the extent of accrual-based earnings management. Applying panel data*

<sup>1</sup> E-mail: teodora.tica.ilic@ef.uns.ac.rs

<sup>2</sup> Corresponding author, e-mail: kristina.pestovic@ef.uns.ac.rs

<sup>3</sup> E-mail: bojana.vukovic@ef.uns.ac.rs

<sup>4</sup> E-mail: nedeljko.tica@polj.edu.rs

<sup>5</sup> E-mail: dusan.sakovic@ef.uns.ac.rs

*regression on a sample of 9,984 observations operating across Balkan economies between 2020 and 2022, the results reveal that a higher proportion of gender diversity within the board demonstrates a statistically significant effect on the extent of earnings management practices. However, a woman holding the CEO position does not seem to significantly constrain conservative earnings management behavior. These findings provide insights into how gender composition affects managerial decision-making and professional judgment in financial disclosure. By focusing on a transitional and institutionally evolving region, this research adds to the broader debate on whether gender diversity enhances ethical sensitivity and transparency in corporate governance. The results emphasize that while gender-balanced boards may foster more prudent reporting environments, leadership positions alone are insufficient to mitigate opportunistic financial behavior. The paper thus underscores the relevance of examining both structural and behavioral dimensions of gender balance when assessing the quality of earnings and corporate accountability.*

## **Introduction**

As corporate governance continues to evolve, the significance of women in leadership positions has emerged as a central force reshaping the contours of decision-making and financial management within organizations. The 21st century has witnessed a paradigm shift in recognizing and enhancing gender balance within corporate boardrooms, a move driven not only by principles of equality but also by the potential economic and strategic benefits it promises. One of the fundamentals of the quality of a financial report is the absence of earnings management activities (Tica et al., 2023). Given the occurrence of material losses and investor failures in recent decades, resulting from disparities in access to information between company management and stakeholders, it is evident that the reliability of data disclosed within financial statements is of great interest to both the academic community and market participants. Financial reports are considered the most significant and comprehensive source of information. Financial report users are witnessing a concerning decline in the quality and transparency of public information. This is due to management's discretionary decision-making, which in turn erodes trust in the concept of financial disclosure. Hence, the impartiality and consistency in information presentation, the accuracy of information, and the materiality and completeness of reporting are fundamental tenets of the contemporary market system and the integrity of financial reporting. These principles ensure that stakeholders have access to dependable information for making

informed decisions. Earnings management, broadly explained as the strategic manipulation of financial accounts to achieve certain objectives, has been a matter of intense scrutiny within the accounting and finance context. While the motives behind earnings management are varied, encompassing both opportunistic and legitimate reasons, understanding the nuanced association between gender composition in managerial positions and earnings manipulation is crucial for fostering corporate governance practices that stand the test of ethical scrutiny.

The corporate governance system establishes guidelines for the manager-owner relationship and facilitates the alignment of stakeholders' objectives to enhance firm efficiency (Vuković et al., 2023). The enhancement of the reliability of reported earnings is a crucial objective of the board, as it is a significant outcome of effective governance that investors expect and value. Comprehending the factors that influence earnings manipulation is crucial for identifying the incentives behind potentially fraudulent activities. This study would suggest indicators that could alert legislative and regulatory bodies, individual and institutional investors, financial analysts, auditors, financial institutions, debtors, and creditors to potential diminished reliability of financial reports, particularly in relation to income. Moreover, the ability to identify manipulative behaviors is essential for maintaining the transparency and trustworthiness of capital markets. This is achieved by mitigating the occurrence of deceptive or misleading financial reporting, hence promoting greater trust and assurance in the market.

The basis for our empirical research stems from the extensively reported disparities in conservative views, risk aversion, and moral conduct between genders. Furthermore, the current corpus of corporate finance literature indicates that the gender of executives might impact their managerial actions, while a substantial amount of finance and accounting literature demonstrates that the accuracy and reliability of financial disclosure is shaped by the intentions of management. Therefore, central to this discourse is the examination of the influence exerted by female engagement on Boards of Directors (BoD) and their ascendancy to the position of Chief Executive Officer (CEO) on the practice of earnings management, a phenomenon that holds critical implications for financial transparency, accountability, and the overall sustainability of corporations.

The paper comprises five distinct sections. The first section provides the introductory segment. Section two pertains to the theoretical foundation,

clarifying the social exchange theory and the formulation of hypotheses. Segment three defines the methodological approach, revealing samples, methods and data gathering. The subsequent segment presents the findings of the data evaluation, accompanied by a discussion. The fifth section provides the conclusions, as well as the theoretical and practical repercussions.

## **Literature Background and Hypothesis Development**

Earnings management involves the deliberate application of discretionary accounting policies and estimates to achieve thresholds of reported income (Siekelova, 2020). Earnings management is the strategic use of accounting procedures that are not in accordance with the best accounting practice to generate financial results that are beneficial for management and the organization, while harmful for third parties (El Diri, 2018). The topic of reporting quality is widely examined and is an issue of importance to shareholders (Durana et al., 2022). Earnings quality refers to the degree to which reported income accurately reflects an organization's financial position for stakeholders. Managers have a professional duty and ethical obligation to ensure that relevant parties get profit reports of exceptional quality in a prompt manner. After the exposure of significant accounting frauds at prominent corporations, researchers have directed their attention to the underlying reasons that drive managers to manipulate results. Earnings management is often motivated by the private benefits of management. Managers whose salary or compensation is based on the achieved financial result have a greater tendency to adopt an accounting methodology that fictitiously increases income to maximize their personal earnings (Badertscher, 2011).

A prominent topic in managerial research and operations is around the inquiry of whether gender differences are evident in leadership behavior and decision-making styles (Berber et al., 2022). The disparities between women and men in management ranks can be acknowledged as a complex interplay of historical, societal, and organizational factors. Women generally exhibit lower levels of insecurity, and risk-taking behavior (Zalata et al., 2022.), while displaying higher levels of legitimacy and ethical behavior what indicate a conservatism approach as fundamental principle of bookkeeping and accounting (Francis et al., 2015), and a reduced probability of engaging in manipulative activities (Ho et al., 2015, Capezio

& Mavisakalyan, 2016). Another contention posits that women exhibit lower levels of assertiveness in decision-making compared to men (Peni & Vähämaa, 2010). Cultural norms and societal attitudes, rather than economic conditions, could also be the primary barriers to women's presence and active involvement on corporate boards (Kamath, 2022).

## **Female Presence in Boardrooms vs Earnings Management**

A growing body of empirical research investigates how gender representation in corporate governance affects both financial transparency and earnings quality. Traditionally, boardrooms were predominantly male-dominated spaces, reflective of societal norms and biases that permeated the corporate sphere. However, as global awareness surrounding gender equality gained momentum, there was a growing realization that harnessing diverse perspectives, experiences, and skills could enhance organizational performance and foster innovation (Kirsch, 2018). This realization laid the groundwork for initiatives promoting gender diversity, with an emphasis on strengthening the involvement of women in strategic governance.

More than ever before, the corporate boards of the largest and most recognized public firms are increasingly likely to exhibit a wide range of gender, ethnic and racial diversity. By 2022, the representation of women on Fortune 500 board seats had increased to above 30%, a significant rise from the 26.5% recorded in 2020 (Deloitte US, 2022). Within the realm of business, women exhibit higher levels of ethical conduct in work environments and demonstrate a reduced inclination to partake in immoral actions for the purpose of obtaining financial incentives (Rizzotti & Frisenna, 2025).

Most closely associated with the present research, Gavious et al. (2012), Arun, Almahrog & Ali Aribi (2015), Gull et al. (2018), Mnif & Cherif (2020), Luo, Xiang & Huang (2017) and Kouaib & Abdullah (2019) analyze the effect of female participation on BoD to incentives on the manipulation of earnings. Gavious et al. (2012) analyzed U.S.-listed high-technology firms and revealed that the presence of female directorship correlates with lower levels of earnings management. Arun et al. (2015) investigate the correlation among women on the BoD and the use of earnings manipulation methods in the United Kingdom. The results specify that organizations with a greater proportion of women on the board are more predisposed to implement less aggressive accounting practices in comparison to organizations with limited gender balance within the

boardroom, pointing out that female directors tend to opt for strategies that decrease earnings rather than strategies that increase profit. Initial results of the study conducted by Gull et al. (2018) are also consistent with previous claims. Their investigation of French publicly traded corporations reveals that female inclusion in boardrooms discourages fraudulent activities. Upon further analysis, they have shown that when taking into account the legal and demographic attributes of women as board members, the outcomes differ, concluding that effective earnings management demands specific competencies and abilities. Mnif & Cherif (2020) indicate that the adverse association between having a woman as a director and engaging in earnings management remains consistent for independent female directors, whereas the converse is true for female directors who have family connections. Luo et al. (2017) conducted an investigation that examines the influence of female directors on boards of directors on managers' manipulation of real activities to achieve the desired level of income. Through a widespread analysis of an extensive number of Chinese publicly traded companies, it is discovered a significant correlation between increased female representation on the BoD and fewer occurrences of manipulating real operations. Also, greater gender diversity at the board level may enhance the credibility of financial reporting and improve the information content reflected in stock prices (Mansoori, 2022). Additionally, this adverse correlation appears more significant when women directors possess a greater degree of ownership. Kouaib & Abdullah (2019) presume that an increase in the presence of gender diversity on corporate boards corresponds to a decrease in both accruals-based and real fraudulent activities. Srinidhi et al. (2011) reveal greater earnings quality within companies with an increased presence of women on their boards. Chen et al. (2016) claim that the presence of female directorship enhances the efficacy of boards in risk control associated with R&D investments. Chen & Gavious (2016) suggest that women in director-rank positions who possess financial literacy are further proficient than men in preventing the manipulation of earnings.

Nevertheless, contrary to these results, Sun et al. (2011) failed to uncover any proof to support the idea that female directorship has an impact on earnings management.

Considering the differing views, this paper examines the associations between female directors and earnings management in the Balkan companies. Thus, the first hypothesis in this research would be set as follows:

***H1: Women's presence in board positions discourages and negatively influences earnings management.***

## **Female CEOs and Earnings Management**

Within the evolving framework of corporate governance, the role of the CEO has garnered increasing attention due to its profound implications for organizational performance and stakeholder interests. As businesses strive for inclusivity and diversity in leadership, the ascendancy of female CEOs to the helm of major corporations has become a focal point of interest and research. This analysis explores how the CEO's gender affects earnings management. Usman et al. (2018) reveal that the CEO's authority level is enhanced when the board of directors reflects gender diversity, implying that having female members in the boardroom diminishes the board's flexibility. Women's involvement in high-ranking managerial positions has witnessed a steady rise in recent years, marking a departure from traditional leadership structures. Furthermore, the effect of female Chief Financial Officers (CFOs) on earnings management is an equally examined topic, whereby revealing highly comparable findings that female CFOs are prone to show higher levels of caution and prudence in their financial disclosures (Francis et al., 2015; Duong & Evans, 2016). Gavious et al. (2012) indicated that earnings manipulation is less prevalent when either the Chief Executive Officer or the Chief Financial Officer is a woman. Gull et al. (2018) came to the same conclusions. Zalata et al. (2022) indicate that, through the pre-SOX period, corporations with both female and male CEOs significantly exhibited categorization shifting. However, their findings show that this phenomenon was more widespread in companies led by female CEOs. Conversely, their findings indicate that female CEOs, who are generally more cautious than their male counterparts, notably reduced their utilization of classification shifting after the implementation of the Sarbanes–Oxley Act. This suggests that the strict legal framework has influenced their approach to manipulating earnings. Kim et al. (2017) investigate the influence of female executives on mitigating earnings manipulation practices in Korea, a nation renowned for its prevalent male-dominated societal norms. Their analysis reveals that a higher share of female executives in leadership positions is linked to a decrease in discretionary accruals. This suggests that having a diversity of genders in the highest positions discourages the practice of opportunistic financial reporting, even in a business background that is predominantly male-dominated.

However, the results of some prior research fail to prove the claim concerning the correlation between female CEO roles and earnings management. In contrast to the conclusions observed in developed markets like the US, Ye et al. (2010) conducted research on Chinese listed companies and findings indicate that there is a lack of significant variations in earnings quality measures for companies with female and male top executives. The set of measures comprises earnings persistence, the capacity of current earnings to forecast future cash flows, the nexus between reported income and market returns, and the absolute level of discretionary accruals. Peni & Vähämaa (2010) discovered no correlation between profit manipulation and the gender of the company's CEO. Harris et al. (2019) demonstrate that female CEOs do not automatically lead to a decrease in earnings management. Female Chief Executive Officers at a lower degree of equity-based remuneration exhibit a lower tendency for manipulating earnings compared to their male counterparts. Nevertheless, when it comes to superior levels of equity-based remuneration, both genders of CEOs demonstrate nearly identical tendencies in manipulating their earnings. Therefore, when provided with significant equity incentives, CEOs, engage in a more significant level of earnings management actions. Li et al. (2021) indicate that female executive roles tend to limit the manipulation of real earnings, both in periods of market decline and growth. Another significant discovery is that female CEOs exhibit greater conservatism in real earnings management as a result of a risk-averse disposition during periods of market decline, but female CFOs are further inclined to restrict actual earnings management during periods of market growth. According to Na & Hong (2017), male CEOs may rely on aggressive discretionary accruals or real activity manipulation to report slight earnings gains, whereas female Chief Executive Officers tend to avoid such earnings management techniques. According to Kumar & Ravi (2022), female chief executive officers who possess less power have reduced levels of earnings manipulation. Nevertheless, female chief executive officers (CEOs) who possess higher levels of power exhibit a propensity for engaging in more pronounced levels of profit manipulation compared to males.

The key aim of the research is to support evolving discourse on corporate governance by examining the influence of female CEOs on practices of managing earnings. Consequently, the subsequent hypothesis is developed.

**H2: Female CEOs discourage and negatively influence earnings management.**

## Methodology and Data

The empirical component of the research paper would involve the application of various methodologies to examine the set of hypotheses. The initial phase of empirical research will involve the selection of a sample where the methodological instruments will be implemented. Subsequently, the first section of the research will focus on the utilization of descriptive statistics. It represents the first stage in the research process by providing a detailed and objective summary of the data. This allows for greater knowledge and insight into the fundamental properties of the dataset, without making any assumptions about its deeper causes. To address the primary research question on the effect of women's participation in the BoD and CEO roles in economic entities in Balkan states, a panel data analysis would be employed. This section of the results will include all essential steps to guarantee the reliable execution of the selected methodology. In case of violated assumptions of panel data analysis, a regression analysis with corrected standard error would be applied.

The analysis is based on a sample of 9,984 observations, comprising companies that were actively operating during the 2020–2022 period across the Balkan countries, including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, Montenegro, North Macedonia, Romania, Serbia, and Slovenia. The sampled firms are registered under diverse industry classification codes, ensuring sectoral heterogeneity. The primary selection criterion was the availability of disclosed information on the gender of company board members and the CEO in the TP Catalyst database (Moody's, 2025). The selected time horizon, although relatively short, is methodologically justified as it allows for consistent and comparable analysis during a period of heightened uncertainty. Notably, this period was particularly critical due to the COVID-19 pandemic and the Russia–Ukraine war, both of which represented unexpected external shocks, making it especially relevant for examining earnings management behavior, as such events tend to increase managerial discretion and incentives for financial reporting adjustments.

Discretionary accruals, calculated according to the Modified Jones Model, are employed to measure the dependent variable (Dechow et al.,

1995). Since the financial statements do not include information on discretionary and non-discretionary accruals, it proves necessary to follow two steps to determine those values. Initially, it is required to compute the total accruals (TA) by employing the subsequent formula:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta CASH_{it} + \Delta STD_{it} - DEP_{it}) / A_{it-1} \quad (1)$$

Where  $i$  represents the company,  $t$  represents year, TA represents total accruals; CA represents current assets, CL represents short-term liabilities, CASH represents a change in Cash and cash equivalents for company  $i$  in year  $t$ ; STD represents the amount of debt in short-term liabilities; DEP represents the amount of depreciation, and A represents total assets.

In the second step, discretionary accruals will be calculated for each firm and for each year that is subject to analysis as a residual of regression equation whose formula is given below:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 \frac{1}{A_{it-1}} + \alpha_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_2 \frac{\Delta PPE_{it}}{A_{it-1}} + \varepsilon_{it} \quad (2)$$

Where REV represents the annual change of revenues, REC represents receivables, PPE represents tangible fixed assets, and  $\varepsilon_{it}$  represents a random error.

Once the discretionary accrual has been determined, the potential relationship between gender representation in key leadership positions—specifically female board directors and female Chief Executive Officers and earnings management can be systematically examined:

$$\begin{aligned} DCC_{it} = & \beta_0 + \beta_1 FBOD_{it} + \beta_2 FCEO_{it} \\ & + \beta_3 AS_{it} + \beta_4 SIZE_{it} + \beta_5 GR_{it} + \beta_6 LIQ_{it} + \beta_7 ROA_{it} \quad (3) \\ & + \beta_8 AGE_{it} + \beta_9 NI_{it} + \varepsilon_{it} \end{aligned}$$

Relying on the examination of the previous literature, the used independent variables are explained in detail in Table 1 that follows.

*Table 1: Variable Specification*

| Type        | Name                            | Abbr. | Formula                                  | Origin  |
|-------------|---------------------------------|-------|--|---|
| Dependent   | Discretionary accrual           | DCC   | Modified Jones model                     | Dechow et al. (1995), Das et al. (2018), Cudia et al. (2020)  |
| Independent | Female participation on BoD (%) | FBOD  | Total female directors / Total directors | Srinidhi et al. (2011), Arun et al. (2015), Bennouri et al. (2018), Usman et al. (2018), Li et al. (2021), Kumar and Ravi (2022)  |
|             | Female as CEO                   | FCEO  | CEO is female = 1, CEO is male = 0.      | Peni and Vähämaa (2010), Kim et al. (2017), Bennouri et al. (2018), Li et al. (2021), Kumar and Ravi (2022), Zalata et al. (2022)   |
|             | Asset Structure                 | AS    | Fixed asset / Total asset                | Khanh and Thu(2019)   |
|             | Firm size                       | SIZE  | ln (Total assets)                        | Lin et al. (2012), Arun et al. (2015), Moghaddam and Abbaspour (2017), Bennouri et al. (2018), Das et al. (2018), Saona and Muro (2018), Khanh and Thu (2019), Cudia et al. (2020), Chen et al. (2020), Kumar and Ravi (2022) |
|             | Sales growth                    | GR    | Annual change of Sales                   | Lin et al. (2012), Bennouri et al. (2018), Khanh and Thu (2019), Kumar and Ravi (2022) Iatridis and Kadorinis (2009), Moghaddam and Abbaspour (2017)  |
|             | Liquidity                       | LIQ   | Current Assets / Current Liabilities     |   |

| Type          | Name | Abbr. | Formula  | Origin  |
|---------------|------|-------|--|---|
| Profitability | ROA  |       | Net income /<br>Total Assets                               | Iatridis and Kadorinis<br>(2009), Lin et al. (2012),<br>Arun et al. (2015),<br>Bennouri et al. (2018),<br>Das et al. (2018), Saona<br>and Muro (2018), Cudia<br>et al. (2020) |
| Firm Age      | AGE  |       | Years since<br>firm<br>establishment                       | Das et al. (2018)   |
| Net income    | NI   |       | Positive net<br>income = 1,<br>Negative net<br>income = 0. | Lin et al. (2012),<br>Heidarpoor et al. (2014),<br>Arun et al. (2015)   |

Source: Authors' research

In accordance with the presented research problem, the goal of the research, as well as the basic hypothesis, the empirical research will be conducted on a sample of business entities with registered headquarters in the Balkan countries. The countries of the Balkans include, in a broad sense, Albania, Bosnia and Herzegovina, Bulgaria, Greece, Croatia, Montenegro, Serbia, Romania, North Macedonia, Slovenia and Türkiye. The period of the analysis would cover the years from 2020 to 2022. The set of observations in the research will amount to 9,984. The research problem requires that the input data on which the research would be performed be collected from the official, publicly disclosed financial statements of the entities. Due to the large number of business entities and the period of the analysis, the international financial database of TP Catalyst (Bureau Van Dijk, 2023) would be used to collect the necessary data.

## Results and Discussion

The empirical investigation, which focused on assessing the quality and reliability of financial reporting from the aspect of earnings management, would start with descriptive statistics of financial indicators. The results are presented in Table 2. The median value of the earnings management variable (DCC) has a negative value, indicating that the companies in the sample dominantly manage earnings downward. Median value of Female

directorship variable and Female CEOs is 0, indicating that corporate governance of selected companies is male-oriented, usually with no women in the boardroom or in the CEO position. Asset structure is, on average, oriented towards current assets rather than fixed, which provides greater flexibility to adapt to changing market conditions and business needs, as these assets can be quickly converted or adjusted. The median value of the growth, liquidity and profitability indicator implies a satisfactory level, which generates a predisposition for sustainability. Companies from the sample, on average, achieve a negative net result.

*Table 2: Summary Statistics*

| <b>Variable</b>        | <b>Median</b> | <b>Mean</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Standard deviation</b> |
|------------------------|---------------|-------------|----------------|----------------|---------------------------|
| Discretionary accruals | -0.12         | -0.22       | -0.96          | 0.70           | 1.02                      |
| Female on BOD          | 0.00          | 0.12        | 0.00           | 1.00           | 0.23                      |
| Female CEO             | 0.00          | 0.12        | 0.00           | 1.00           | 0.32                      |
| Asset Structure        | 0.38          | 0.41        | 0.00           | 0.99           | 0.28                      |
| Firm Size              | 9.28          | 9.43        | 4.33           | 18.18          | 1.66                      |
| Growth                 | 0.11          | 0.38        | -1.00          | 751.82         | 8.31                      |
| Liquidity              | 1.62          | 2.62        | 0.02           | 90.05          | 4.18                      |
| Profitability          | 3.71          | 5.21        | -91.11         | 83.70          | 10.13                     |
| Firm Age               | 31.00         | 56.25       | -2.00          | 123.00         | 44.14                     |
| Net income             | 1.00          | 0.83        | 0.00           | 1.00           | 0.38                      |

*Source: Authors' computations*

The assumption about the direction of the linear correlation between the dependent and independent variables would be estimated by the Pearson matrix listed in Table 3. The coefficients disclose a negative and statistically significant relationship between female participation on the BoD and earnings management, while a negative, but insignificant linear connection is recognized between the female CEOs variable and earnings management.

*Table 3: Correlation matrix findings*

| Variable | DCC     | FBOD    | FCEO    | AS      | SIZE    | GR     | LIQ    | ROA    | AGE   | NI    |
|----------|---------|---------|---------|---------|---------|--------|--------|--------|-------|-------|
| DCC      | 1.000   |         |         |         |         |        |        |        |       |       |
| FBOD     | -0.02*  | 1.000   |         |         |         |        |        |        |       |       |
| FCEO     | -0.01   | 0.64**  | 1.000   |         |         |        |        |        |       |       |
| AS       | 0.08**  | 0.05**  | 0.02*   | 1.000   |         |        |        |        |       |       |
| SIZE     | 0.01    | -0.11** | -0.05** | 0.24    | 1.000   |        |        |        |       |       |
| GR       | -0.16** | 0.03**  | 0.02*   | 0.01    | -0.00   | 1.000  |        |        |       |       |
| LIQ      | 0.03*   | 0.01    | 0.01    | -0.12** | -0.07** | -0.01  | 1.000  |        |       |       |
| ROA      | -0.21** | 0.01    | 0.00    | -0.28** | -0.06** | 0.05** | 0.13** | 1.000  |       |       |
| AGE      | 0.04**  | -0.02*  | -0.04** | -0.06** | 0.11**  | -0.01  | 0.36** | -0.00* | 1.000 |       |
| NI       | -0.10** | 0.00    | -0.00   | -0.24** | -0.01   | 0.01   | 0.07** | 0.53** | -0.00 | 1.000 |

*Statistical significance: \*\* < 0.01%, \* < 0.05%; Source: Authors' computations*

Prior to implementing the analysis through panel regression, the validity of the model's assumptions must be verified to ensure the robustness of the results. Testing the basic premise that there is no link between independent variables is crucial. The results of the multicollinearity test of independent variables are shown in Table 4, using Variance Inflation Factors (VIF) for both models.

*Table 4: Multicollinearity test*

| Variable        | Variance Inflation Factor (VIF) | 1/Variance Inflation Factor (TOL) |
|-----------------|---------------------------------|-----------------------------------|
| Female on BOD   | 1.72                            | 0.58                              |
| Female CEO      | 1.70                            | 0.59                              |
| Profitability   | 1.46                            | 0.68                              |
| Net income      | 1.41                            | 0.71                              |
| Asset Structure | 1.19                            | 0.84                              |
| Firm Size       | 1.10                            | 0.91                              |
| Liquidity       | 1.03                            | 0.97                              |
| Firm Age        | 1.03                            | 0.97                              |
| Growth          | 1.00                            | 0.99                              |
| Mean VIF        |                                 | 1.29                              |

*Source: Authors' computations*

Given that the VIFs are below 10 and the TOL coefficients are below 1, multicollinearity may not be detected. Moreover, it is imperative to verify two other fundamental assumptions of the panel study, specifically the presence of heteroskedasticity and autocorrelation. The test results are presented in Table 5.

*Table 5: Heteroskedasticity and autocorrelation tests*

| Test                               | t test   | p value |
|------------------------------------|----------|---------|
| Wooldridge test                    | 0.33     | 0.56    |
| Breusch-Pagan / Cook-Weisberg test | 4,868.64 | 0.00    |

*Source: Authors' computations*

The Wooldridge test confirmed the deficiency of autocorrelation, indicated by the p-value exceeding the 5% significance level. The Breusch-Pagan Cook-Weisberg test is performed to assess the potential existence of heteroskedasticity. As far as the p-value is lower than the 5% significance level, the heteroskedasticity is detected. Hence, it becomes necessary to transform a regression model with computation of robust standard errors included. The transformed regression models' findings are summarized in Table 6.

*Table 6: Transformed model findings*

| Variable            | Coefficient | p value |
|---------------------|-------------|---------|
| Female on BOD       | -0.18       | 0.02    |
| Female CEO          | 0.07        | 0.14    |
| Asset Structure     | 0.18        | 0.00    |
| Firm Size           | 0.01        | 0.90    |
| Growth              | -0.02       | 0.00    |
| Liquidity           | 0.01        | 0.00    |
| Profitability       | -0.02       | 0.00    |
| Firm Age            | 0.00        | 0.13    |
| Net income          | 0.04        | 0.35    |
| Const               | -0.27       | 0.01    |
| No. of observations | 9,984       |         |
| F test              | 24.72       |         |
| p-value             | 0.00        |         |

*Source: Authors' computations*

The results discover that female directorship negatively and significantly impacts the earnings management, confirming H1. These outcomes are coherent with the results of Gavious et al. (2012), Arun et al. (2015), Gull et al. (2018), Mnif & Cherif (2020), Luo et al. (2017) and Kouaib & Abdullah (2019). Findings suggest that greater gender diversity could foster better managerial decisions, more robust risk control, and

strengthened corporate social responsibility. From a corporate governance perspective, having women in leadership positions may bring unique insights and approaches that could contribute to a more ethical and transparent financial environment. Findings have implied that women in leadership positions may possess different communication styles and ethical considerations than their male counterparts. This divergence in approaches could potentially lead to a more comprehensive evaluation of financial data and a heightened sensitivity to potential red flags related to earnings manipulation. Female directors may prioritize open communication and collaboration, creating an environment that discourages unethical financial practices. The proposition that female directors have a better predisposition to decrease earnings manipulation is grounded in the belief that diversity in leadership leads to more robust decision-making processes.

Moreover, findings envisages that the female gender of a CEO is not a determining factor in whether manipulative activities occur in accounting, regarding income level, which confirms the conclusions of Ye et al. (2010) and Peni & Vähämaa (2010) and rejects H2, indicating the fact that fraudulent activities in accounting are typically driven by various factors, including organizational culture, internal controls, ethical standards, and individual motivations, rather than the gender of the CEO. Instead, the focus should be on promoting a strong ethical culture, implementing robust internal controls, and fostering an environment that encourages transparency and accountability. Despite anticipating a negative relationship, the reasoning is based on the indication that women CEOs often have a strategic mindset, decisiveness, effective communication skills to articulate the organization's vision, adaptability in navigating dynamic business environments and the capacity to manage stress adeptly, it is essential to acknowledge that the effectiveness of a CEO in deterring earnings manipulation is influenced by a myriad of factors beyond gender, such as leadership style, experience, and individual ethical values. The assumption that a female CEO automatically leads to a reduction in earnings manipulation oversimplifies the intricate interplay of these variables. Results reveal that both male and female CEOs could demonstrate strong ethical leadership or, conversely, engage in questionable financial practices. Leadership tone, irrespective of the CEO's gender, sets ethical standards for the entire organization. A corporate culture that prioritizes transparency, accountability, and long-term sustainability is more likely to deter earnings manipulation, regardless of whether the CEO is male or female.

## Conclusion

In this research, panel data regression is conducted using 9,984 observations. The relationship between earnings quality and a pair of female roles dummies, together with control firm-specific control factors, is examined. Specifically, the empirical investigation of Balkan companies reveals that the gender of the directors could impact the accuracy of reported earnings. These regressions give strong evidence to demonstrate that corporation with female directorship has an association with income decreasing discretionary accruals, signifying that female participation in boardroom results with implementation of more cautious financial reporting techniques. This discovery aligns closely with the current body of research on gender disparities in conservative views and risk avoidance. Consistent with prior studies, such as Gavious et al. (2012), Arun, Almahrog & Ali Aribi (2015) and Gull et al. (2018), the results support the argument that female directors tend to exhibit stronger ethical awareness and risk-averse behavior, which translates into more conservative accounting choices. Similar evidence documented in both developed and emerging markets suggests that gender-diverse boards enhance the credibility of financial reporting by limiting opportunistic earnings manipulation. However, no connection has been found between profit manipulation and the gender of the company's CEO. This result is in line with Ye et al. (2010) and Peni and Vähämaa (2010), who argue that CEO gender alone does not systematically explain earnings management practices once governance and firm-level characteristics are controlled for. The outcome indicates that earnings management behavior is likely driven by broader organizational and governance-related factors rather than by the CEO's gender alone. Some leaders, irrespective of gender, may adopt a collaborative and transparent approach that encourages ethical decision-making, while others may prioritize more authoritarian or secretive strategies.

In conclusion, this research seeks to unravel the complex function of women's participation in the boardroom and in the CEO position, and its consequential influence on earnings manipulation habits. As organizations strive for greater inclusiveness and accountability, understanding the dynamics at play in the intersection of gender diversity and financial reporting is imperative.

With respect to the study constraints and the prospects for further investigation, the effect of female participation on BoD and female CEOs on

earnings management may vary based on cultural, institutional, and contextual factors. It is essential to recognize that the success of female leadership in mitigating fraudulent earnings reporting may be influenced by cultural perceptions, legal frameworks, and industry norms. Different industries may have unique characteristics that affect the relationship between female leadership and earnings management. For instance, sectors with high regulatory oversight might experience different dynamics compared to industries with more flexibility in financial reporting. Additionally, implementing changes in leadership often takes time, and their effects may not be immediately reflected in financial performance. A longitudinal study might be required to capture the long-term impact of female directors and CEOs on earnings management accurately.

By shedding light on this critical aspect of corporate governance, we aspire to inform corporate governance practices by emphasizing the potential gains of gender diversity in top leadership positions. Also, investors, particularly those with a spotlight on environmental, social, and governance (ESG) factors, can use the study's insights to make more informed investment decisions. Companies with diverse leadership teams may be perceived as having lower risks associated with earnings management. Policymakers and advocacy groups could leverage the study's results to advocate for policies promoting gender diversity in corporate leadership. Understanding the potential impact on financial practices could strengthen the case for implementing and supporting initiatives aimed at increasing female representation. At the end, organizations could develop targeted professional development programs to nurture and support female talent, fostering their advancement into leadership roles.

## References

- [1] **Arun, T. G., Almahrog, Y. E., & Ali Aribi, Z.** (2015). Female directors and earnings management: Evidence from UK companies. *International Review of Financial Analysis*, 39, 137–146. <https://doi.org/10.1016/j.irfa.2015.03.002>
- [2] **Badertscher, B. A.** (2011). Overvaluation and the Choice of Alternative Earnings Management Mechanisms. *The Accounting Review*, 86(5), 1491–1518. <https://doi.org/10.2308/accr-10092>
- [3] **Bennouri, M., Chtioui, T., Nagati, H., & Nekhili, M.** (2018). Female board directorship and firm performance: What really matters? *Journal of Banking & Finance*, 88, 267–291. <https://doi.org/10.1016/j.jbankfin.2017.12.010>

[4] **Berber, N., Strugar-Jelača, M., Bjekić, R., & Marić, S.** (2022). Effects of socio-demographic factors on leadership style in Serbian banking industry. *Analji Ekonomskog Fakulteta u Subotici*, 58(47), 117–130. <https://doi.org/10.5937/AnEkSub2247117B>

[5] **Capezio, A., & Mavisakalyan, A.** (2016). Women in the boardroom and fraud: Evidence from Australia. *Australian Journal of Management*, 41(4), 719–734. <https://doi.org/10.1177/0312896215579463>

[6] **Chen, E., & Gavious, I.** (2016). Complementary relationship between female directors and financial literacy in deterring earnings management: The case of high-technology firms. *Advances in Accounting*, 35, 114–124. <https://doi.org/10.1016/j.adiac.2016.06.001>

[7] **Chen, H., Jory, S., & Ngo, T.** (2020). Earnings management under different ownership and corporate governance structure: A natural experiment with master limited partnerships. *The Quarterly Review of Economics and Finance*, 76, 139–156. <https://doi.org/10.1016/j.qref.2019.05.005>

[8] **Chen, S., Ni, X., & Tong, J. Y.** (2016). Gender Diversity in the Boardroom and Risk Management: A Case of R&D Investment. *Journal of Business Ethics*, 136(3), 599–621. <https://doi.org/10.1007/s10551-014-2528-6>

[9] **Cudia, C. P., Cruz, A. L. D., & Estabillo, M. B.** (2021). Effect of Firm Characteristics and Corporate Governance Practices on Earnings Management: Evidence from Publicly Listed Property Sector Firms in the Philippines. *Vision: The Journal of Business Perspective*, 25(1), 77–87. <https://doi.org/10.1177/0972262920953428>

[10] **Das, R. C., Mishra, C. S., & Rajib, P.** (2018). Firm-specific Parameters and Earnings Management: A Study in the Indian Context. *Global Business Review*, 19(5), 1240–1260. <https://doi.org/10.1177/0972150918788748>

[11] **Dechow, P. M., Hutton, A. P., Kim, J. H., & Sloan, R. G.** (2012). Detecting Earnings Management: A New Approach. *Journal of Accounting Research*, 50(2), 275–334. <https://doi.org/10.1111/j.1475-679X.2012.00449.x>

[12] **Dechow, P. M., Sloan, R. G., & Sweeney, A. P.** (1995). Detecting Earnings Management. *The Accounting Review*, 70(2), 193–225.

[13] **Deloitte US.** (2025) Missing Pieces Report on Board Diversity. Retrieved May 30, 2025, from <https://www.deloitte.com/us/en/programs/center-for-board-effectiveness/articles/missing-pieces-report-board-diversity.html>

[14] **Duong, L., & Evans, J.** (2016). Gender differences in compensation and earnings management: Evidence from Australian CFOs. *Pacific-Basin Finance Journal*, 40, 17–35. <https://doi.org/10.1016/j.pacfin.2016.07.004>

[15] **Durana, P., Valaskova, K., Siekelova, A., & Michalkova, L.** (2022). Appraisal of Earnings Management across the Sectors. *Journal of Business Economics and Management*, 23(2), 399–425. <https://doi.org/10.3846/jbem.2022.16563>

[16] **El Diri, M.** (2018). *Introduction to Earnings Management*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-62686-4>

[17] **Francis, B., Hasan, I., Park, J. C., & Wu, Q.** (2015). Gender Differences in Financial Reporting Decision Making: Evidence from Accounting Conservatism. *Contemporary Accounting Research*, 32(3), 1285–1318. <https://doi.org/10.1111/1911-3846.12098>

[18] **Gavious, I., Segev, E., & Yosef, R.** (2012). Female directors and earnings management in high-technology firms. *Pacific Accounting Review*, 24(1), 4–32. <https://doi.org/10.1108/01140581211221533>

[19] **Gull, A. A., Nekhili, M., Nagati, H., & Chtioui, T.** (2018). Beyond gender diversity: How specific attributes of female directors affect earnings management. *The British Accounting Review*, 50(3), 255–274. <https://doi.org/10.1016/j.bar.2017.09.001>

[20] **Harris, O., Karl, J. B., & Lawrence, E.** (2019). CEO compensation and earnings management: Does gender really matter? *Journal of Business Research*, 98, 1–14. <https://doi.org/10.1016/j.jbusres.2019.01.013>

[21] **Heidarpoor, F., Zare Rafiee, S., & Zare Rafiee, S.** (2014). Drivers of Earnings Management: The Profit and Loss before Earning Management. *International Journal of Accounting and Financial Reporting*, 1(1), 23. <https://doi.org/10.5296/ijaf.v4i2.5674>

[22] **Ho, S. S. M., Li, A. Y., Tam, K., & Zhang, F.** (2015). CEO Gender, Ethical Leadership, and Accounting Conservatism. *Journal of Business Ethics*, 127(2), 351–370. <https://doi.org/10.1007/s10551-013-2044-0>

[23] **Iatridis, G., & Kadorinis, G.** (2009). Earnings management and firm financial motives: A financial investigation of UK listed firms. *International Review of Financial Analysis*, 18(4), 164–173. <https://doi.org/10.1016/j.irfa.2009.06.001>

[24] **Jones, J. J.** (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research*, 29(2), 193. <https://doi.org/10.2307/2491047>

[25] **Kamath, B.** (2022). Board gender diversity and intellectual capital performance of firms in India. *Journal of Women's Entrepreneurship and Education*, (1-2), 97-116. <https://doi.org/10.28934/jwee22.12.pp97-116>

[26] **Kim, H. A., Jeong, S. W., Kang, T., & Lee, D.** (2017). Does the Presence of Female Executives Curb Earnings Management? Evidence from Korea. *Australian Accounting Review*, 27(4), 494–506. <https://doi.org/10.1111/auar.12169>

[27] **Kirsch, A.** (2018). The gender composition of corporate boards: A review and research agenda. *The Leadership Quarterly*, 29(2), 346–364. <https://doi.org/10.1016/j.lequa.2017.06.001>

[28] **Kouaib, A., & Almulhim, A.** (2019). Earnings manipulations and board's diversity: The moderating role of audit. *The Journal of High Technology*

*Management Research*, 30(2), 100356.  
<https://doi.org/10.1016/j.hitech.2019.100356>

[29] **Kumar, S., & Ravi, R.** (2023). Earnings management: Are men from Mars and women from Venus? *Managerial Finance*, 49(6), 1017–1035. <https://doi.org/10.1108/MF-04-2022-0154>

[30] **Li, X., Than, E. T., Ahmed, R., Ishaque, M., & Huynh, T. L. D.** (2023). Gender diversity of boards and executives on real earnings management in the bull or bear period: Empirical evidence from China. *International Journal of Finance & Economics*, 28(3), 2753–2771. <https://doi.org/10.1002/ijfe.2562>

[31] **Lin, B., Lu, R., & Zhang, T.** (2012). Tax-Induced Earnings Management in Emerging Markets: Evidence from China. *Journal of the American Taxation Association*, 34(2), 19–44. <https://doi.org/10.2308/atax-10236>

[32] **Luo, J., Xiang, Y., & Huang, Z.** (2017). Female directors and real activities manipulation: Evidence from China. *China Journal of Accounting Research*, 10(2), 141–166. <https://doi.org/10.1016/j.cjar.2016.12.004>

[33] **Mansoori, E.** (2022). Earnings quality and price informativeness: The moderating role of females on board of directors. *Journal of Women's Entrepreneurship and Education*, (1–2), 176–193. <https://doi.org/10.28934/jwee22.34.pp176-193>

[34] **Mnif, Y., & Cherif, I.** (2021). Female board directorship and earnings management. *Pacific Accounting Review*, 33(1), 114–141. <https://doi.org/10.1108/PAR-04-2020-0049>

[35] **Moghaddam, A., & Abbaspour, N.** (2017). The Effect of Leverage and Liquidity Ratios on Earnings Management and Capital of Banks Listed on the Tehran Stock Exchange. *International Review of Management and Marketing*, 7(4), 99–107.

[36] **Moody's Analytics, Inc.** (2025). TP Catalyst (Version 2025). Retrieved May 30, 2025, from <https://login.bvdinfo.com/R1/TPCatalyst>

[37] **Na, K., & Hong, J.** (2017). CEO Gender And Earnings Management. *Journal of Applied Business Research (JABR)*, 33(2), 297–308. <https://doi.org/10.19030/jabr.v33i2.9902>

[38] **Peni, E., & Vähämaa, S.** (2010). Female executives and earnings management. *Managerial Finance*, 36(7), 629–645. <https://doi.org/10.1108/03074351011050343>

[39] **Rizzotti, D., & Frisenna, C.** (2025). Do Women Behave More Ethically Than Men? Evidence from the Impact of Female CEO on the Level of Earnings Management. In M. Agostini, V. Beretta, M. C. Demartini, A. Ghio, & S. Trucco (Eds.), *Diversity and Equity in Accounting: Emerging Issues, Challenges and Opportunities* (pp. 215–225). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-78247-3\\_15](https://doi.org/10.1007/978-3-031-78247-3_15)

[40] **Saona, P., & Muro, L.** (2018). Firm- and Country-Level Attributes as Determinants of Earnings Management: An Analysis for Latin American Firms. *Emerging Markets Finance and Trade*, 54(12), 2736–2764. <https://doi.org/10.1080/1540496X.2017.1410127>

[41] **Siekelova, A., Androniceanu, A., Durana, P., & Michalikova, K. F.** (2020). Earnings Management (EM), Initiatives and Company Size: An Empirical Study. *Acta Polytechnica Hungarica*, 17(9), 41–56. <https://doi.org/10.12700/APH.17.9.2020.9.3>

[42] **Srinidhi, B., Gul, F. A., & Tsui, J.** (2011). Female Directors and Earnings Quality. *Contemporary Accounting Research*, 28(5), 1610–1644. <https://doi.org/10.1111/j.1911-3846.2011.01071.x>

[43] **Sun, J., Liu, G., & Lan, G.** (2011). Does Female Directorship on Independent Audit Committees Constrain Earnings Management? *Journal of Business Ethics*, 99(3), 369–382. <https://doi.org/10.1007/s10551-010-0657-0>

[44] **Tica, T., Vuković, B., Jakšić, D., & Tica, N.** (2023). Strategic Aspects of Earnings Management. *Proceedings of the 28th International Scientific Conference Strategic Management and Decision Support Systems in Strategic Management*. 28th International Scientific Conference Strategic Management and Decision Support Systems in Strategic Management. [https://doi.org/10.46541/978-86-7233-416-6\\_51](https://doi.org/10.46541/978-86-7233-416-6_51)

[45] **Usman, M., Zhang, J., Farooq, M. U., Makki, M. A. M., & Dong, N.** (2018). Female directors and CEO power. *Economics Letters*, 165, 44–47. <https://doi.org/10.1016/j.econlet.2018.01.030>

[46] **Vuković, B., Tica, T., & Jakšić, D.** (2024). Firm value determinants: Panel evidence from European listed companies. *Strategic Management*, 29(1), 55–71. <https://doi.org/10.5937/StraMan2300052V>

[47] **Ye, K., Zhang, R., & Rezaee, Z.** (2010). Does top executive gender diversity affect earnings quality? A large sample analysis of Chinese listed firms. *Advances in Accounting*, 26(1), 47–54. <https://doi.org/10.1016/j.adiac.2010.02.008>

[48] **Zalata, A. M., Ntim, C., Aboud, A., & Gyapong, E.** (2022). Female CEOs and Core Earnings Quality: New Evidence on the Ethics Versus Risk-Aversion Puzzle. In K. Martin, K. Shilton, & J. Smith (Eds.), *Business and the Ethical Implications of Technology* (pp. 209–228). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-18794-0\\_12](https://doi.org/10.1007/978-3-031-18794-0_12)

*Article history:* Received: October 14, 2025

Accepted: January 30, 2026

First Online: February 6, 2026